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DIVISION OF FEED CONTROL SERVICE

COTTONSEED MEAL



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†As of February 1, 1919.

*In cooperation with the School of Veterinary Medicine, A. and M. College of Texas.

**In cooperation with the United States Department of Agriculture.

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COTTONSEED MEAL

F. D. FULLER, Chief, Division of Feed Control Service
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For several years some of the Texas cottonseed crushers have been requesting that the Feed Control Service lower the standards for cottonseed meal. That is to say, they wish to market a product containing more cottonseed hulls, and still call the product cottonseed meal. The object of the present bulletin is to show the public the significance of such a movement.

DECREASE IN QUALITY OF COTTONSEED MEAL

The quality of cottonseed meal sold in Texas has been steadily decreasing. This is shown in Table 1, taken from Bulletin No. 189. The productive value decreased from 19.28 in 1907 to 16.98 in 1915, a decrease of 12.5 per cent.

Table 1.—Decrease in Value of Texas Cottonseed Meal

	Protein	Ether Extract	Crude Fiber	Nitrogen-free Extract	Digestible Protein	Productive Value	Hulls
	%	%	%	%	%		%
1907—July to January	47.65	9.73	6.50	23.74	41.07	19.28	8.8
1909—July to January	47.41	9.13	7.66	23.37	40.87	18.78	11.5
1911—July to January	46.59	8.79	7.78	24.60	40.16	18.63	12.0
1913—July to January	45.14	8.51	9.52	24.05	38.59	17.86	16.3
1915—July to January	45.40	8.08	8.61	25.14	38.83	17.56	14.0
1917—cottonseed meal							
Average	43.32	8.02	10.74	25.51	36.71	17.27	19.4
1918—cottonseed meal							
Average	43.21	7.60	11.30	25.98	36.63	17.10	20.7
Cracked Feed No. 4							
1917-18 average	41.84	6.50	12.01	26.92	35.4	16.35	22.5
Cracked Feed No. 5							
1917-18 average	39.88	6.32	12.76	27.78	33.6	15.85	24.5
Cracked Feed No. 6							
1917-18 average	37.73	6.91	14.44	27.63	31.44	15.87	28.6
Feed No. 4 5.1% excess hulls	41.2	5.00	13.9	27.00	34.7	15.2	27.3
Feed No. 5 12.1% excess hulls	38.5	5.00	15.6	28.1	32.2	15.00	31.5
Feed No. 6 17.5% excess hulls	36.00	5.00	17.7	28.5	29.8	14.3	35.7

The feeders who think they are getting the same quality of feed as formerly are naturally deceived, and are disappointed in the results of the feeding.

The enforcement of the Texas feed law is the only thing that prevents a further decrease in the quality of cottonseed meal. The natural tendency is to reduce the quality to as low a point as will be permitted.

DEFINITION OF COTTONSEED MEAL

Cottonseed meal is defined as the pressed decorticated kernels of cottonseed, free from excess of hulls.

As a matter of fact, many cottonseed crushers put in as much hulls as the law permits. Some cottonseed crushers wish to put all the hulls into the product and still call it cottonseed meal. The consumer of cotton seed meal prefers to buy the meal and hulls separately, as he does not care to pay meal prices for hulls.

Cottonseed meal containing more than a moderate amount of hulls, is really a **mixed feed**. It is a mixture of the kernel residue, which has a high feeding value, and of hulls, which have a very low feeding value.

It is thus important that a line be drawn beyond which the product containing too much hulls can not be called cotton seed meal. Practically since 1907, this line has been drawn at 43 per cent in Texas. This standard has been established by custom and usage and accepted by crushers and feeders.

We should continue to draw the line at 43 per cent. A cottonseed product containing less protein should not be permitted to bear the name of cottonseed meal or cake.

STANDARDS FOR COTTONSEED MEAL

The Texas standard for cottonseed meal from 1907 to 1916 was that it should contain not less than 50 per cent protein and fat combined, and not more than 9 per cent crude fiber.

On February 2, 1916, Director Youngblood agreed with a committee of the Texas Cottonseed Crushers' Association that cottonseed meal should contain not less than 44 per cent protein, or not less than 51 per cent protein and fat, and not more than 11 per cent crude fiber. This definition was adopted by the Cottonseed Crushers' Association at San Antonio in May, 1916. The crushers were not satisfied with this agreement, and the following agreement was adopted later:

"We, the undersigned, acting for and in behalf of the Texas Cottonseed Crushers' Association, the Cattle Raisers' Association of Texas, and the Sheep and Goat Raisers' Asso-

ciation of Texas, have come to the following understanding with the Feed Control Service on this 20th day of July, 1917, at the Chamber of Commerce, Fort Worth, Texas:

"It is agreed that the following shall be the definition of cottonseed meal:

"Cottonseed meal is composed of the decorticated kernels of cottonseed, free from excess of hulls and other foreign materials.

"It is further agreed that the following shall be the standards for the various grades of cottonseed meal and cottonseed feed which may be offered or exposed to the trade for sale in this State—

"Choice Cottonseed Meal shall contain not less than 48 per cent of protein, not less than 7 per cent of fat, and not more than 9 per cent of crude fiber.

"Prime Cottonseed Meal shall contain not less than 45 per cent of protein, not less than 6 per cent of fat, and not more than 10 per cent of crude fiber.

"Ordinary Cottonseed Meal shall contain not less than 43 per cent of protein, not less than 6 per cent of fat, and not more than 12 per cent of crude fiber.

"Cottonseed Feed Number Four shall contain not less than 41.20 per cent of protein, not less than 5 per cent of fat, and not more than 14 per cent of crude fiber.

"Cottonseed Feed Number Five shall contain not less than 38.50 per cent of protein, not less than 5 per cent of fat, and not more than 18 per cent of crude fiber.

"Cottonseed Feed Number Six shall contain not less than 36 per cent of protein, not less than 5 per cent of fat, and not more than 22 per cent of crude fiber.

"Cottonseed Cake shall correspond to cottonseed meal in composition and as to standards.

"It is understood that the standards for cottonseed feeds numbers Four, Five and Six shall be the same whether ground or cracked.

"Committeemen for the Texas Cottonseed Crushers' Association: C. C. Littleton, P. S. Grogan, Ed. Woodall.

"Committeemen for the Texas Cattle Raisers' Association: F. S. McFarland, A. C. Williams, E. B. Spiller.

"Committeemen for the Texas Sheep and Goat Raisers' Association: B. M. Halbert, Ed. L. Mears, James B. Murrah.

"Accepted—B. Youngblood, Director, Texas Agricultural Experiment Station."

These standards were also adopted by the Texas Cottonseed Crushers' Association in May, 1918. In spite of these agreements, a committee of the Texas Cottonseed Crushers' Association, appointed for another purpose, requested the

Feed Control Service and a committee of the Cattle Raisers' Association of Texas to agree to lower the standard for cottonseed meal to 36 per cent protein.

On September 19, 1918, certain cottonseed millers, particularly in South Texas, sent out a circular letter to the trade suggesting that out-of-state buyers be given preference over purchasers residing in the State. This was done with the evident purpose of forcing the Division of Feed Control Service to lower the standards for cottonseed meal and cake, inasmuch as the standards for these products in other states are not so high as in Texas. A copy of this circular letter follows:

Houston, Texas, Sept. 19, 1918.

TO ALL MEMBERS OF THE SOUTH TEXAS COTTON
SEED OIL MILLERS ASSOCIATION.

Gentlemen:

At a meeting of the Texas Cottonseed Crushers' Association held in Dallas recently, I was appointed chairman of a Committee consisting of Mr. C. N. Thatcher of Wills Point, Mr. E. H. Young of Dallas and myself, to confer with the Texas Feed Control about sampling and analyzing carload shipments of cottonseed meal and cake when sold to Texas buyers.

Your committee met with Mr. Fuller and Mr. Sullivan of the Feed Control and Mr. Spiller and Mr. Todd of the Texas Cattle Raisers' Association in the office of the Texas Cattle Raisers in Ft. Worth on Tuesday, Sept. 17. An agreement was entered into regarding sampling at mills, which I think will be satisfactory to the mills. Secretary Gibson's office will send you full details within the next day or two.

After this agreement was entered into the Committee took up with the Cattle Raisers and also the Feed Control Representatives the question of changing the present Feed Control rules so as to allow us to sell 36 per cent or over protein meal or cake under its proper name instead of having to sell it as "Cottonseed Feed" or "Meal and Hulls." As you know, the Texas Feed Control is the only one in the United States that requires us to misbrand our products and sell them under the stigma of adulteration. We feel that if the Cattle Raisers would insist on the Feed Control changing its rules it would be done, but I regret to report that the Cattle Raisers refused to do this.

In all States but Texas our 36 per cent to 41 per cent cake and meal is sold as "Prime Cottonseed Meal or Cake" and this year at least the out of State buyers are anxious to get every pound we will make; they will furnish you with tax tags free of cost to you and will pay brokerage and exchange so that the Government price will be net to you.

I therefore suggest that in making sales of your cake and meal from now on you instruct your broker to sell only to out of State buyers where products will be sold under their proper classification. And to keep these instructions in force until our Feed Control sees fit to change its obnoxious rules.

You are required by our Government to cut at least 145 lbs. of lint, and more if possible, so that it is now no longer possible to make 43 per cent cake but our 39 per cent to 41 per cent cake and meal is preferred by feeders in other States so we have no fear of not having an ample market to dispose of all we can make.

Yours very truly,

(Signed) R. F. ISBELL,

Secretary-Treasurer.

SELLING HULLS FOR MEAL

As seen above some Texas cottonseed crushers want to call a product containing 36 per cent protein "Cottonseed Meal." This means that they would place 82.5 pounds of meal and 17.5 pounds of hulls in a 100 pound bag, and call the mixture "Cottonseed Meal."

Why do they wish to do this? There is nothing to prevent them from manufacturing and selling such a product in Texas, provided they call it "Cottonseed Feed No. Six." The answer is simple: the purchaser who buys Cottonseed Feed No. Six knows he is buying meal and hulls and pays accordingly. But if "Cottonseed Feed No. Six" is sold under the name of "Cottonseed Meal" the purchasers are willing to pay more for it, for they would think they were buying cottonseed meal, especially the poorer and more ignorant people. Therefore, the cottonseed crusher wishes to sell Cottonseed Feed No. Six under the term "Cottonseed Meal" so that he will induce the purchaser to pay more money for the same product.

Do Texas farmers want to pay more for cottonseed feed by permitting the crushers to call it cottonseed meal?

COTTONSEED MEAL AS MIXED FEED

The decrease in quality of cottonseed meal previously shown is partially due to increased hull content.

If some of the cottonseed crushers had their will, there would be no limit to the amount of hulls present in meal, until all the hulls were in the meal, and none sold alone. Cottonseed meal would then be a mixed feed, what it is now to some extent.

THE PURCHASER SHOULD KNOW WHAT HE BUYS

Cottonseed crushers say they tell what their product is when they guarantee the protein in it. But consumers have a

definite thing in mind when they buy cottonseed meal. If they are furnished with goods of a lower grade they are defrauded. The term "Cottonseed Meal" means a definite article to the consumer, fixed by years of usage.

The consumer has a right to know what he buys. If he buys cottonseed meal or hulls and meal he should know it. He should not be sold cottonseed feed camouflaged as cottonseed meal.

PATRIOTISM

At a time when Texas was short of feeds, when the price of cottonseed meal was fixed by the Government, when such action was distinctly contrary to the interest of the Government in the war, some cottonseed crushers recommended that cottonseed products be not sold in Texas but shipped outside the State because cottonseed feed containing 16 per cent more hulls than cottonseed meal may not be sold as cottonseed meal. The price fixed was the same both within and without the State, but the attempt was made to deprive the Texas people of needed feed, to force a change in name that would prevent the consumer from knowing how much hulls he was getting. In justice to the crushers it must be said that most of them condemned this action.

SELLING ON A PROTEIN BASIS

Some cottonseed crushers claim that they sell on a protein and fat basis, therefore the name is not of importance and so they should be allowed to call the product cottonseed meal, without regard to the hull content.

If the name is not of importance, then the cottonseed crushers should not object to calling the product containing less than 43 per cent protein "Cottonseed Feed" and stating the percentage of hulls present. These men really say that it does not matter what the product is called, as long as it is called cottonseed meal. It is true that large quantities of cottonseed products are sold upon a protein and fat basis, and adjustment made in the price according to the analysis. The man who buys a carload can easily protect himself by means of an analysis.

But there are large quantities of cottonseed products sold in quantities of from one sack to several tons. These purchasers buy by the name rather than by the analysis. They cannot afford to have an analysis made in order to secure a rebate. It is these purchasers that the feed law must be especially careful to protect. The term "Cottonseed Meal" has become standardized by usage, and thousands of farmers and dairymen look at it as a definite product, as indeed it is. If the tag reads "Cottonseed Feed" and the amount of excess

hulls is stated in connection with the analysis, these small purchasers are placed on notice as to the character of the goods purchased. If the standards should be lowered, these purchasers would believe that they were buying better goods than they really were, and they would suffer.

When a carload of cottonseed meal is sold, found to be below guarantee, and a rebate paid to the purchaser, it does not always follow that the consumer gets the benefit. In many cases such cottonseed meal is retailed in small lots at the usual price, and the merchant gets the rebate as a special profit, while the consumer pays the bill. If, however, the tags are changed to conform with the analysis, then the consumer may get the rebate, or at least a part of it.

Cottonseed crushers who sell in carload lots and deal little with the small consumers, are in many cases utterly unable to see the injustice worked on the consumer when the goods are improperly named or improperly tagged. In many cases of such improper tagging the crusher pays the rebate but the actual consumer never gets any of it, because the goods are claimed on the tag to be better than they really are.

The same applies to the improper use of the term "Cottonseed Meal." The crusher may sell upon a protein and fat basis, and derive only a small benefit from the use of a misleading name, but the consumer, who is accustomed to a better article, pays a price for the name, which may go largely into the pockets of the "middleman."

ATTITUDE OF THE DIVISION OF FEED CONTROL SERVICE

The attitude of the Feed Control Service toward cottonseed meal and all other feeds, is that the consumer shall have what he buys. This is the object of the Texas feed law.

The following extract from an editorial in "Flour and Feed," November, 1918, illustrates this attitude.

"Our theory for the purpose of argument is that if any manufacturer is such a fool as to put ivory nut turnings into a mixed feed for animal consumption, he should be permitted to do so, if he properly posts the man who buys the feed that he has done so. This is the crux of the whole proposition. The tag on the bag of feed should be an honest and complete description of what the feed is made of. It is to this end that all legislation on the feed business should be directed, backed up, of course, by legislation to make sure that this end is carried out. If the manufacturer tells just exactly what his feed is made of and guarantees the chemical analysis, and the inspection system that is followed makes sure that this is done, there will be less room for misrepresentation and fraud in connection with the merchandising of these articles than there is today in connection with almost anything of any description

that the public buys. In other words, under such a plan there could be no misrepresentation at all. Misrepresentation then would be flagrant violation of law and would be easily punishable."

This is to say, the names of the feeds should show without a doubt their exact character. The percentage of all the ingredients which go into a mixed feed should be stated. The Texas law does not go as far as this, but the writers believe that all laws should contain a provision to this effect. Doubtful, ambiguous, or misleading names should not be used for any feed; the name should show without doubt what the feed is.

The Division of Feed Control Service enforces the Texas feed law and suggests names, makes definitions and formulates standards in accordance with the spirit of the law, aided, of course, by the most reliable chemical, manufacturing and and feeding data available. We use names which are not misleading. The name "Cottonseed Meal" is one that has long been in use, and the quality of cottonseed meal is higher in Texas than in any other State. For adulterated products, we choose appropriate names and designations.

The trouble with some of the Texas millers is that they endeavor to overcome the judicial tendencies of the Division of Feed Control Service with sophistry and influences which do no credit to the Texas Cottonseed Crushers' Association. Most of the millers know, and the rest of them will in time learn, that fair play is the best policy. This, the Division of Feed Control Service extends to all millers in all times.

The Division of Feed Control Service has to consider the interests of all buyers or consumers of feeding stuffs, and the relation of the feed manufacturing business to the economic condition of society at large. The entire problem is one which should be governed by plain economic principles, and not the opinion either of manufacturers or consumers, both classes of which are biased witnesses. The millers have not yet successfully demonstrated the benefit to society at large for them to mix cottonseed hulls with cottonseed meal and sell the mixture as cottonseed meal. The Feed Control Service believes that they will never be able to do so.

It is not right in dealing with fellow men to practice deception in any form, or to misrepresent anything which may be placed upon the market for sale. Honesty and integrity must stand out very prominently in all business relations if any degree of prosperity is attained. One may desire success and wealth, but they must be obtained only through legitimate means. At no time is it right, from a moral standpoint, to mix oat hulls with corn and sell the product as corn and oat

chops. It is ethically wrong to adulterate wheat shorts with ground corn cobs and place the mixture on the market as "Choice Gray Shorts." At no time is it right to adulterate cottonseed meal with twenty-five per cent of cottonseed hulls and sell the product as cottonseed meal. That is, it is contrary to the first principles of ethics. It would be just as proper for a dairyman to sell water for cream as for a feed manufacturer to put on the market a mixture of cottonseed meal and cottonseed hulls and label the package as containing "Prime Cottonseed Meal." There is nothing injurious in cottonseed hulls; they contain a small amount of protein and fat, and if anyone wants to buy cottonseed meal and hulls mixed together, he should be accommodated, but when he wants cottonseed meal he does not want an adulterated article.

Texas cottonseed products are the highest in quality in the world, and the millers who would wilfully adulterate them and bring them to the low levels of other states which are unable to make products of Texas' quality are working against the best interests of the milling industry in Texas and the best interests of the State itself.

Our soils and climatic conditions are such that Texas is renowned throughout the world as producing the highest quality of cottonseed meal. In the Eastern states, however, cottonseed runs high in oil and correspondingly low in protein. Because of the extensive advertising which has been given to the high protein content of Texas cottonseed meal, and because, in part, of the general shortage of protein concentrates throughout the United States, due to war conditions, there has been an unusually heavy demand for Texas cottonseed meal in other states, particularly in the Northwest, Central West and the East.

At a recent conference with millers, many complained that it was difficult to comply with the rules of the War Industries Board requiring them to cut 145 pounds of linters from a ton of seed, and at the same time producing cottonseed meal containing 43 per cent of crude protein. It was brought out in the discussion that this could be done providing the mills were equipped with machinery for the purpose of producing high-grade cottonseed meal and cake, as many of the modern mills are so equipped at the present time.

The records of the Division of Feed Control Service show that many mills in Texas have succeeded in making high-grade meal in the face of the Federal requirements, and other millers might have done the same had their mills been so equipped. There is no doubt that many of the mills now making low-grade meal have done so of their own volition to supply a patronage which they have developed for low-grade

products. The Division of Feed Control Service recognizes this as a temporary problem of some mills not properly equipped, but even with these it is one of only a temporary nature and which has been obviated now that the war is over and the demand for linters has decreased to normal. The Feed Control Service, therefore, has declined to lower the standards for cottonseed products, feeling that the present standards, taking into consideration both the manufacturer and consumer, are the least unfair and the most equitable that could be promulgated.

The Division of Feed Control Service realizes that there is a number of factors, any one of which may occasion fluctuations in the quality of cottonseed meal. Some of these factors are seasonal in nature, while others involve the efficiency of the mill machinery and even the miller himself. We do not deem them to be of sufficient importance to justify periodical lowering of standards in compliance with requests which are constantly coming from the millers, neither are we permitted to do this in view of the scientific evidence presented in this bulletin.

It may be stated in this connection that equally urgent requests are made upon the Division of Feed Control Service by the consumers of feeding stuffs throughout the State for either maintaining the present standards or raising them rather than lowering. The Feed Control Service must hear all alike and make rulings in accordance with the law and the facts available.

WHAT IS ADULTERATION?

Some cottonseed crushers say that to call a cottonseed product "cottonseed feed" and state the percentage of excess hulls, is to place the stigma of adulteration upon it.

The Texas law reads as follows:

"For the purpose of this act, a feeding stuff shall be deemed to be adulterated if it contains any sawdust, dirt, damaged feed, or any foreign matter whatever, or if it is in any respect not what it is represented to be; or if any rice hulls or chaff, peanut shells, corn cobs, oat hulls, or other similar substances of little or no feeding value are mixed therewith; provided, that no wholesome mixture of feeding stuffs shall be deemed to be adulterated if the true percentage of constituents thereof is plainly and clearly stated on the package, and made known to the purchaser at the time of the sale."

As inferior cottonseed meal contains an excess of cottonseed hulls, it would be adulterated under the Texas law if the percentage of hulls was not stated.

It would also be adulterated under the Texas law if represented to be cottonseed meal, when it contains so much hulls that it is not cottonseed meal, but cottonseed feed.

But the law expressly says that a feeding stuff is not adulterated if the true percentage of constituents is plainly and clearly stated on the package and made known to the purchaser at the time of sale. Therefore, cottonseed feed is not adulterated if the percentage of cottonseed hulls is stated.

But if termed cottonseed meal and the percentage of hulls were not stated, the product would be adulterated under the terms of the law, because it would not be the product which custom and usage have established to be cottonseed meal in Texas. The attitude of the courts toward such matters is shown by the following extract from the charge of a Federal judge in a case concerning water-ground meal, brought under the Federal law.

"As matter of law I charge you that a man when he purchases an article, has a right to buy whatever he pays his money for; it may be a pure fancy on his part, and it may be the veriest whim on his part, but if he stipulates in the contract that he is to buy certain specified articles or an article prepared in a certain specified way, and that is the contract and the agreement, and he pays for it, then he is entitled to have it, although the result may be that he chooses to buy an inferior article at a higher price, he has the right to have what he pays for. Therefore in this case the question is not as to the character of the substance in here, not any question of moral turpitude, that defendant only furnished an inferior article, that does not come in; the question is as to whether these sacks of meal contained the article that they were stated to contain, or is the statement on them calculated to mislead and deceive the person, that is, the consumer, in buying the article that he intends to buy."

SALE OF LOW GRADE COTTONSEED PRODUCTS NOT TO THE INTEREST OF THE CONSUMER

While the policy of the Feed Control Service is not to object to the sale of any wholesome feeding stuff, provided that it is properly named and labeled, yet it must be observed that the manufacture of low grade cottonseed products is not to the public interest. It will be shown that it is not to the advantage of the manufacturer to manufacture such feeds, and it is frequently not to the advantage of the consumer to buy them. The latter point will be discussed first.

A 36 per cent protein cottonseed product could be made from 2000 pounds of 43 per cent protein cottonseed meal and 400 pounds of hulls, in round numbers.

2000 lbs. meal contains 850 lbs. protein.

400 lbs. hulls contains 12 lbs. protein.

2400

862

Per cent protein 36.3.

The cottonseed meal is a concentrated feed; the hulls are a roughage, and have a lower feeding value than any hay and many straws. Many farmers and dairymen have all the roughage they need, even more than they need. Roughage goes to waste on many farms. But when a farmer buys 36 per cent cottonseed feed, for every ton of cottonseed meal he gets, he is compelled to buy 400 pounds of cottonseed hulls. He must buy something he may not need and may not want. This is not to the public interest.

In buying this 400 pounds of hulls to the ton of cottonseed meal, the farmer must pay for the sacks to hold it; he must pay the freight to his station at feed rates, which is a higher rate than hull rates. He must pay for the additional cost of handling at the mill, and he must pay a profit to the manufacturer and retailer. All this on something which he may not need to buy at all. Even if he needs the hulls, it would be more to his interest to save the sacks, save the difference in freight rates, and save probably a larger profit, by buying the hulls unmixed.

Of course, if the consumer, not knowing the amount of hulls in the cottonseed feed, pays a higher price for it than he would for the meal and hulls that it would take to make it, he suffers by paying an unreasonable price. This he must either take as a loss, or pass on to the purchaser of the milk, meat, or other farm products obtained from the cottonseed meal. Part of the profit may go to the oil mill, but a large part goes to the retailer.

The foregoing discussion with reference to 36 per cent cottonseed feed applies likewise to the higher grades of cottonseed feed, though to less extent.

MANUFACTURE OF LOW GRADE COTTONSEED PRODUCTS NOT TO THE INTEREST OF THE MANUFACTURER

The manufacture of low grade cottonseed products is not altogether to the interest of the manufacturer.

The Food Administration fixed the price for cottonseed meal at \$57.00 per ton on a basis of 43 per cent protein, and \$1.00 less for each per cent less protein. The price for hulls was fixed at \$20.00 per ton.

At these prices, the manufacturer making 36 per cent protein meal would lose money. In addition to the cost of meal and hulls, he will lose about 6 per cent oil in the hulls, and would need four additional bags.

COST OF MEAL

2000 lbs. 43 per cent meal.....	\$57.00
400 lbs. hulls	4.00
4 bags at 20 cents.....	.80
24 lbs. oil in the hulls at 15 cents.....	3.60
	<hr/>
Total cost.....	\$65.40
2400 lbs. feed at \$50.00 per ton.....	60.00
	<hr/>
Loss.....	\$ 5.40

The loss of oil could be avoided by adding the hulls to the cake after the oil has been expressed from them while it is being ground. If the hulls are left in with the meal they will retain oil, with the approximate results above stated.

The manufacturer may either take care of this loss or pass it on to the consumer, or to the farmer from whom he buys the seed. This can be done only by making the consumer pay more for the meal and cake than it is really worth, or by paying the farmer less for his seed than it is really worth.

It is not practical for the cottonseed crusher to manufacture 36 per cent protein feed from Texas seed, unless it is made by adding hulls directly to higher grade cake or meal.

When cutting 145 pounds linters per ton of seed, as required by the War Industries Board, some mills had difficulty in making 43 per cent protein meal. That is no reason for not letting the consumer know what product he is buying.

The writers believe that the best results in the extraction of oil are secured when 43 per cent protein meal, or better, is made in Texas. If more hulls are present in the cake, they absorb oil and reduce the amount expressed.

It is a question whether the manufacture of low grade cottonseed products as a general thing would not be to the detriment of the industry as a whole. It is the desire of some cottonseed crushers to put all the hulls in the product, and sell it as cottonseed meal, if permitted. The United States market for Texas cottonseed meal is probably not the Northeast, where it comes in competition with cottonseed from the other Southern states, that have the advantage of a shorter haul; but to the North, West and Northwest, where transportation conditions favor Texas products.

Concentrated products in general justify longer hauls, than less concentrated products. Transportation costs are less per unit value. High grade cottonseed meal should therefore find more distant markets than the low grade products.

When a concentrated product is reduced by means of low grade materials, the transportation costs and other expenses connected with hauling, are likewise increased. The cost per unit of feeding value is thus increased. If this feed comes in competition with more concentrated feeds in the same market, it is at a disadvantage to the extent of the increased cost, and it is liable, in the long run, to suffer from the competition. There may be a temporary advantage to the manufacturer, as to the middle man, in lowering the grade, but this temporary advantage may be more than offset by the permanent disadvantage under which the feed labors.

To put the matter in another way, it is not economical to ship cottonseed hulls or similar low grade feeds long distances. The transportation costs are too large in proportion to the feeding value. There may be temporary emergencies, when roughage is high, when such feeds may be shipped long distances, but under normal conditions it does not pay.

It is still less economical to ship cottonseed hulls mixed with cottonseed meal such distances. The freight rate on the hulls in such a mixture is higher than for the hulls alone. There is the cost of bags and the greater cost of handling. A temporary advantage may result from such a mixture, under some conditions, but the matter will eventually be adjusted so that the industry bears the burden of the increased cost.

The general manufacture of low grade cottonseed products would thus appear contrary to the best interest of the industry.

STANDARDS IN OTHER STATES

Some Texas cottonseed crushers claim that they are placed at a disadvantage because other states permit the sale of lower grade products as cottonseed meal.

Texas cottonseed crushers are not placed at any disadvantage in manufacture. They can make any wholesome product that they desire. The only restriction is that they must correctly name and label their products when sold in Texas. They are not at a disadvantage in Texas as all mills sell under the same names. They are not at a disadvantage outside the State, as when Texas cottonseed products are sold outside the State they do not come under the Texas feed law, but are subject to the requirements of the law of the state or country to which they are shipped. They then meet the competition of the other states on an equal basis.

The lowest standard for protein in cottonseed meal is 36 per cent fixed by law for South Carolina. North Carolina and Georgia require 38.62 per cent (See Bulletin No. 189). In fixing an interstate standard, 36 per cent was taken, as the

product of South Carolina could not be excluded from interstate commerce.

The seed grown in South Carolina and other Eastern states is lower in protein and will not make the same grade of cottonseed meal as Texas seed. The following table is taken from the report of the committee on cottonseed meal of the Association of Feed Control Officials of the United States.

The meals are calculated from the average analyses of seed examined.

Table 2.—Hypothetical meals calculated to 11 per cent crude fiber

State	Moisture	Protein	Fat	Fiber	Nitrogen-free Extract	Ash
	%	%	%	%	%	%
North Carolina .	8.00	38.62	7.00	11.00	29.13	6.25
South Carolina .	8.00	38.32	7.00	11.00	29.66	6.02
Georgia	8.00	39.64	7.00	11.00	28.68	5.68
Alabama	8.00	39.53	7.00	11.00	28.49	5.98
Tennessee	8.00	40.52	7.00	11.00	26.82	6.66
Arkansas	8.00	40.92	7.00	11.00	26.85	6.23
Oklahoma	8.00	43.50	7.00	11.00	25.37	5.13
North Texas	8.00	43.02	7.00	11.00	25.76	5.12
South Texas....	8.00	43.74	7.00	11.00	24.89	5.37
Average	8.00	40.99	7.00	11.00	27.18	5.83

It is seen that when Texas meal contains 43 per cent protein with 11 per cent crude fiber, North Carolina's contains 38.62 per cent and Georgia's 39.64 per cent. But crude fiber means hulls; thus with equal hull contents, Texas is on a parity with North Carolina and Georgia in the quantity of hulls permitted in meal. While the quantity of protein is different the quantity of hulls is approximately the same.

South Carolina apparently permits more hulls, but some of its seed may be poorer in quality than the sample examined. Oklahoma permits more hulls than Texas.

SOME VIEWS OF CONSUMERS

The following telegrams present some views of consumers:

"Farmers, ranchmen and bankers request if quality cottonseed meal is changed that protein should be raised instead of lowered."

"Crawford,"

"Spur, Texas."

"Dallas county dairymen and other cottonseed meal consumers unalterably opposed to further reduction of protein content of cottonseed meal. They think forty-three per cent is as low as should be permitted wherever it is an advantage to mixture to add hulls consumer prefers to do mixing."

"C. O. Moser,"

"Dallas, Texas."

"We want unadulterated cottonseed meal high in protein. We have plenty of roughage."

"C. P. Deadler,"

"Angleton, Texas."

"Farmers and stockmen here all prefer high grade meal and cake. No one willing for mixture meal and hulls sold as cottonseed meal. Low protein content cake and meal not salable. Enter protest against adulteration and misbranding."

"R. P. Elrod,"

"San Saba, Texas."

"Feeders prefer high grade meal. Not willing to allow adulteration and misbranding to extent of allowing mixtures of meal and hulls to be sold as cottonseed meal."

"B. D. Black,"

"Brady, Texas."

SOME RESOLUTIONS

RESOLUTION OF AMERICAN NATIONAL LIVE STOCK ASSOCIATION

RESOLUTION NO. 15.

Demanding High Standards of Cottonseed and Other
Animal Food Products.

"WHEREAS, for the past few years a number of the manufacturers of cottonseed products have been gradually decreasing the value of these feed stuffs by the addition of more cottonseed hulls; and

"WHEREAS, the Interstate Cottonseed Crushers' Association requested the Association of Feed Control Officials of the United States to lower their standards for cottonseed meal, and introduce a new and inferior grade of meal, which request was refused; and

"WHEREAS, the Feed Control Service of Texas has consistently held the position that Texas cottonseed products should not be made inferior or equal to the average for other states by lowering the standards to the level of those states; and

"WHEREAS, the Director of the Texas Experiment Station has ruled that the lowest quality of Texas cottonseed meal shall be known as "Prime," and the standard shall be 51 per cent. of protein and fat combined, with a minimum of 44 per cent. for protein and not more than 11 per cent. of crude fiber, and that any deficiency in percentage of fat may be made up by an additional percentage of protein, and that cottonseed products inferior to the standard for "Prime" shall hereafter be known as "Cottonseed Feed" or "Cottonseed Meal and Hulls", which definition was adopted by the Texas Cottonseed Crushers' Association; therefore be it

"RESOLVED, that the American National Live Stock Association, in convention assembled at Cheyenne, Wyoming, January 18-20, 1917, express its appreciation to the Association of Feed Control Officials of the United States and to the Feed Control Service of Texas for the firm stand which they have taken for legitimate standards for cottonseed products, as well as other feeding stuffs; and be it further

"RESOLVED, that the American National Live Stock Association encourage and support in every possible manner the movement, with a view to maintaining the highest standards for cottonseed products, as well as other feed stuffs, consistent with the inherent quality of said raw products, with efficiency in milling, and with the interest of the consumers of the United States; and be it further

"RESOLVED, that a copy of these resolutions be sent to Mr. Philip H. Smith, secretary-treasurer of the Association of Feed Control Officials of the United States, Amherst, Massachusetts; to President Charles DuBose of the Texas Cottonseed Crushers' Association, Alice, Texas, and to Hon. James E. Ferguson, Governor of Texas, Austin, Texas."

RESOLUTION OF THE CATTLE RAISERS' ASSOCIATION OF TEXAS

"WHEREAS, the Feed Control Service, in accordance with facts obtained by investigation of feed and feeding problems, maintains the highest standards of quality for cottonseed meal, cake and other feeding stuffs sold in this State, to be found in the country, and

"WHEREAS, during the past winter when the members of this Association were confronted with the momentous problem of wintering their live stock in the face of a prolonged drouth and a great scarcity of feeding stuffs of every kind, the Feed Control Service rendered an invaluable service in a most satisfactory manner by conducting analysis of each car of meal and cake, and by acting as arbiter between the manufacturer and feeder as to the price which should be paid on the basis of protein content.

"THEREFORE, BE IT RESOLVED, that the Cattle Raisers' Association of Texas at its Forty-second Annual Convention in Dallas, Texas, March 19, 20, 21, 1918, go on record as opposed to any interference whatsoever with the present administration of the Pure Feed Law, or to its consolidation with any other branch of the State Government at this time, it being the experience of the Association that those having the technical knowledge derived from the investigation of feed and feeding problems are best qualified to enforce the provisions of the Pure Feed Law without fear or favor, and in a manner consistent with the best interest of the agricultural and live stock business of the State; and be it

"RESOLVED, further that a copy of this resolution be sent to Governor Hobby and to each member of the Senate and House of Representatives."

RESOLUTION ADOPTED BY THE EXECUTIVE COMMITTEE OF THE SHEEP AND GOAT RAISERS' ASSOCIATION OF TEXAS

"WHEREAS, ordinarily the ranges of Texas produce crude fiber in the form of grasses, brush, and other roughages, in abundance, and

"WHEREAS, in case of shortage of such roughages in periods of long drouth it is more economical for us to buy our crude fiber unmixed with concentrates, and

"WHEREAS, continuously strong pressure is brought to bear upon the Feed Control Service of the State of Texas by millers, jobbers, and out-of-state brokers, to force this Service to permit the adulteration of what we know to be good cottonseed meal with cottonseed hulls, and to permit the use of names on tags containing such mixtures as are misleading to the farmers and stockmen of this State; therefore be it

"RESOLVED, that the Executive Committee of the Sheep and Goat Raisers' Association of Texas, in meeting assembled at Del Rio, Texas, on the 10th and 11th days of February, 1919, urge the Feed Control Service to maintain the present high standards which chemical analysis, and nutrition and feeding experiments, show to be just and fair for farmer, miller, and ultimate feeder; we further urge upon the Legislature, our Governor, and others interested in the economic development of Texas, the importance of supporting the Feed Control Service in its efforts to maintain these standards, which are just and fair to every party at interest, and to the people as a whole."

FIGHTING THE BATTLE OF THE PEOPLE

For ten years the Feed Control Service has been resisting the attempts of certain cottonseed crushers to reduce the quality of cottonseed meal. They wish to add 17.5 per cent more hulls, and still sell the mixture to the people as cottonseed meal.

For a long time the Feed Control Service had no help from the people whom it protects. During this time the Feed Control Service had a disagreeable duty to perform, constantly resisting the attempts to lower the standards of cottonseed meal. Lately the Cattle Raisers' Association, and the Sheep and Goat Raisers' Association have given their assistance. It is now time that the people should know the facts, and assist in protecting themselves.

The Feed Control Service made agreements with the Cottonseed Crushers' Association, but hardly were the agreements written, before some of the cottonseed crushers would wish to tear up the agreements and lower the standards.

It is time that this matter was permanently settled. When agreements are to be treated as "scraps of paper" more stringent measures must be taken. There is only one way for this matter to be settled once for all, so that the Feed Control Service will be relieved from the constant pressure to permit cottonseed crushers to adulterate cottonseed meal with hulls, that is, for the legislature to adopt proper standards for cottonseed meal.

PROPOSED LEGISLATION

BY HALL

A BILL
TO BE ENTITLED

S. B. 245

"An act to amend Article 5903, Title 92, Revised Civil Statutes, 1911, empowering the Director of the Texas Agricultural Experiment Station to adopt standards or definitions for concentrated feeding stuffs and such regulations as may be necessary for the enforcement of the law, providing that such standards and definitions shall not be of a higher grade

or standard than that adopted by the Feed Control Officials of the United States.

"Be it enacted by the Legislature of the State of Texas:

"Section 1. That Article 5903, Title 92, Revised Civil Statutes, 1911, be so amended as to hereafter read as follows:

"Article 5903—The Director of the experiment station is hereby empowered to adopt standards or definitions for concentrated feeding stuffs and such regulations as may be necessary for the enforcement of the law. The said director shall have the power to refuse the registration of any feeding stuff under a name which would be misleading as to the materials of which it is made up, or which does not conform to the standards and definitions aforesaid, **provided that such standards and definitions so adopted shall not be of a higher standard or grade than that adopted by the Feed Control Officials of the United States.** Should any of said materials be registered and it is afterwards discovered that they are in violation of the provisions, the said director shall have the power to cancel the registration after ten days notice. The director of the Texas Experiment Station is hereby empowered to adopt such regulations as may be necessary for the enforcement of all the provisions of this act.

"The fact that the Director of the Texas Experiment Station has adopted a higher standard and definition for concentrated feeding stuffs than that adopted by the Feed Control Officials of the United States and higher than that adopted by other cotton raising states which prevents the cotton growers of Texas from successfully competing with the cotton growers of other states, creates an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days be suspended and that this act take effect from and after its passage and it is so enacted."

Introduced February 10, 1919.

THE EFFECTS OF THIS BILL

This bill is apparently innocent, but contains a "joker" which we have printed in bold face type. Some of the effects of this "joker" would be:

1. To largely transfer the authority to adopt definitions and standards for feeding stuffs from the Director of the Texas Agricultural Experiment Station to the Association of Feed Control Officials of the United States.

2. It would chiefly affect cottonseed meal, as the only standard adopted by the Feed Control Officials applies to this product.

3. It would reduce the protein content of cottonseed meal from 43 per cent to 36 per cent, thereby permitting the addition of 350 pounds more hulls per ton.

4. It would reduce Texas cottonseed meal from the highest rank in the United States to the lowest; only South Carolina having such a low standard by law.

5. It would permit the use of 714 pounds of hulls in Texas cottonseed meal as compared with 520 pounds as permitted by South Carolina.

6. It might permit oat hulls to be sold in mixtures in this state as "Oat Feed."

7. It might permit other adulterated feeds to masquerade under the name of mixed feed.

8. It might cause disputes and litigation and interfere with the enforcement of the Texas feed law.

WHAT THE LEGISLATURE SHOULD DO

We suggest that if any legislation is proposed, the following standards which have been established in Texas by custom and usage and are based upon analytical determinations, nutrition investigations and feeding experiments made during the past fourteen years, would be fair and equitable to manufacturers and consumers.

We believe that the cottonseed crushers should not be permitted to put one pound more hulls into cottonseed meal than has been done before.

1. No cottonseed product shall be sold, exposed or offered for sale within the State of Texas under the name of choice cottonseed meal or cake which contains less than 48 per cent protein and 55 per cent protein and fat combined.

2. No cottonseed product shall be sold, exposed or offered for sale within the State of Texas under the name of prime cottonseed meal or cake which contains less than 45 per cent protein and 51 per cent protein and fat combined.

3. No cottonseed product shall be sold, exposed or offered for sale within the State of Texas under the name of ordinary cottonseed meal or cake which contains less than 43 per cent protein and 49 per cent of protein and fat combined.

4. Cottonseed products containing 41.2 per cent crude protein shall be termed "Cottonseed Feed No. Four," and the percentage of hulls present must be stated.

5. Cottonseed products containing 38.5 per cent crude protein shall be termed "Cottonseed Feed No. Five," and the percentage of hulls present must be stated.

6. Cottonseed products containing 36 per cent crude protein shall be termed "Cottonseed Feed No. Six," and the percentage of hulls present must be stated.

7. The product from pressing the whole, clean, cottonseed for the production of oil, should be termed "whole-pressed cottonseed."